Variant with *Sr24* Virulence in Race TTKS of *Puccinia graminis* f. sp. *tritici*

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Stem rust resistance gene *Sr24* in wheat is a valuable gene, effective against most races of *Puccinia graminis* f. sp. *tritici* worldwide, including race TTKS (or Ug99). In 2006, moderately susceptible to susceptible infection responses were observed on wheat lines and cultivars carrying *Sr24* in a field stem rust screening nursery planted in Njoro, Kenya. Virulence on *Sr24* was suspected to be present. Samples were collected from the field nursery and pure cultures were derived by single-pustule isolation. Isolates were tested on the stem rust differentials and supplemental lines carrying *Sr24*, *Sr31*, *Sr38* and *SrWld-1*. Among 28 single-pustule derived isolates, twenty-one isolates were race TTKS with virulence on *Sr24* and seven isolates were race TTKS avirulent on *Sr24*. The results confirmed the presence of virulence on *Sr24* in the Njoro stem rust nursery. Isolates with virulence on *Sr24* appeared to be a new variant within race TTKS that possesses virulence on *Sr24* and *Sr31*. The new virulence combination has substantially increased the vulnerability of wheat to stem rust worldwide. With the need for differentiating variations within race TTKS, a revision of the North American stem rust nomenclature system was proposed by adding lines carrying resistance genes *Sr24*, *Sr31*, *Sr38* and *SrWld-1* in the differentials as the fifth set. The revised nomenclature system will designate isolates of race TTKS lacking virulence on *Sr24* (i.e. typical Ug99) as race TTKSK, and isolates of race TTKS with *Sr24* virulence as race TTKST.